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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,230	08/22/2003	Shao-Chun Chen	14312US02	1388
23446 7590 06/12/2008 MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			EXAMINER HERRERA, DIEGO D	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 06/12/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/646,230

Applicant(s)

CHEN, SHAO-CHUN

Examiner

DIEGO HERRERA

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/24/2008 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criss et al. (US publication 20010029178 A1), in view of Angelo et al. (US patent 5974250) and in view of Peleg (US patent 6546552).

Regarding claim 1. Criss et al. discloses a mobile services network (abstract fig. 1 (whole), 12 (elements 296, 297, 298)) comprising: a mobile electronic device (mobile terminal fig. 1 element 36); an update package repository (paragraph [0013]); generator with nodes preprocessor which generates a package of update information and wherein, generating comprises identifying as nodes (filenames) corresponding locations in an old version of firmware for the mobile electronic device and a new version of firmware for the mobile electronic device, for which contents of the location in the new version of firmware was predicted based upon the old version of firmware (fig. 1, 5, 7; paragraphs [0052]-[0065]; Criss et al. teaches the update packages either requested by user of mobile device or by the mobile device is able to determine what filenames (nodes) it needs on the update package and whether filenames need to be deleted, added or modified). However, Criss et al. do not specify a management server,

identifying as a node a location that was not predicted. Angelo et al. teaches a management server (col. 7 lines: 18-22, SMI system management mode) and Peleg teaches identifying as a node a location that was not predicted (abstract, column 2 line 31- column 3 line 20, column 14 line 33- column 15 line 17 where Peleg teaches identifying data records and link to data records (nodes) which were not known (had not been predicted) before the updating process and noting the difference between an old version of a data structure and a new version of a data structure). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Criss et al. to specifically include management server and identify as nodes location which had not been predicted as taught by Angelo and Peleg in order to securely distribute code package updates while minimizing the size of the difference between the old and new versions thus minimizing the size of the update package (as suggested by Peleg in column 1 lines 26-50 and column 10 lines 10-15).

Consider claim 2. The network according to claim 1, Criss et al. discloses wherein the generator with nodes preprocessor generates update packages by comparing an old version and a new version of firmware (Criss et al. teaches comparison according to predetermined criteria to updating being appropriate, paragraph [0016]-[0017], [0051], [0074]).

Consider claim 3. The network according to claim 2, Criss et al. discloses wherein the update packages are populated into the update package repository (fig. 5, 12-14, paragraph [0101], [0103], Criss et al. teaches where the files are stored the path taken can be stored in the host computer or FTP as to where the files names are located).

Consider claim 4. The network according to claim 2, Criss et al. discloses wherein the generated update packages incorporate filter information (paragraph [0017], [0016], [0051]; Criss et al. teaches that system compares version of operating system and then sends what the mobile needs on update packages).

Consider claim 5. The network according to claim 2, Criss et al. discloses wherein the generated update packages incorporate node information (fig. 5, 13; paragraph [0101], [0103], Criss et al. discloses teaches that the mobile determines that the data and file names that is to be downloaded to the mobile is different from what the mobile has, hence, the node information is included in the update packages).

Consider claim 6. The network according to claim 1, Criss et al. discloses wherein the management server and the update package repository are communicatively coupled (fig. 1, abstract, paragraph [0047], Criss et al. teaches management server or host is hardwired communicatively with FTP server).

Consider claim 7. The network according to claim 1, Criss et al. discloses wherein the generator with nodes preprocessor and the update package repository are communicatively coupled (fig. 1, 12, paragraph [0100], Criss et al. teaches that the computer host and the FTP server are communicatively connected by the system backbone).

Consider claim 8. The network according to claim 1, Criss et al. discloses wherein the generator with nodes preprocessor is located at a remote location from the update package repository (fig. 1, 5a-5d, 12, paragraph [0099]-[0100], Criss et al. teaches that host and FTP server and base stations are separate from each other, Host interacts

with mobile through the base station determining update package necessitated by mobile, FTP server contains update packages).

Consider claim 9. The network according to claim 1, combination of Criss et al. and Angelo et al. discloses wherein the mobile electronic device comprises:
a non-volatile memory (EEPROM paragraph [0054], Criss et al. teaches EEPROM in mobile terminal);

a random access memory (RAM paragraph [0063], [0062], fig. 5a-5d, Criss et al. teaches type of file being assign to the package of update to mobile device hence the ability that the mobile device has Random Access Memory); and security services (abstract, col. 2 lines: 12-20, 56-62; Angelo et al. teaches system for transmitting securely).

Consider claim 10. The network according to claim 9, Criss et al. wherein the non-volatile memory comprises: an update agent; a firmware and real-time operating system; a download agent; and a boot initialization (paragraph [0054], Criss et al. teaches that non-volatile memory can comprise of related utility programs, hence, the ability of possessing download agent, boot initialization, update agent, firmware, and real-time operating system).

Consider claim 11. The network according to claim 10, Criss et al. discloses wherein the non-volatile memory further comprises an operating system layer (BIOS paragraph [0053]-[0054], Criss et al. teaches basic-input-output-system updates).

Consider claim 12. The network according to claim 10, Criss et al. discloses wherein the non-volatile memory further comprises an end-user-related data and content unit

(paragraph [0054], Criss et al. teaches that non-volatile memory can comprise of related utility programs, hence, the ability of possessing download agent, boot initialization, update agent, firmware, and real-time operating system).

Claims 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criss et al., and Angelo et al., Peleg (US patent 6546552) and Hayes, jr. et al. (US patent 5974312).

Regarding claim 16. the combination of Criss et al. and Angelo et al. discloses a method for generating an update package using an old image and a new image of a firmware in a mobile services network, the method comprising: wherein, generating comprises identifying as nodes (filenames) corresponding locations in an old version of firmware for the mobile electronic device and a new version of firmware for the mobile electronic device, for which contents of the location in the new version of firmware was predicted based upon the old version of firmware (fig. 1, 5, 7; paragraphs [0052]-[0065]; Criss et al. teaches the update packages either requested by user of mobile device or by the mobile device is able to determine what filenames (nodes) it needs on the update package and whether filenames need to be deleted, added or modified). However, Criss et al. do not specifically disclose converting symbols in the new and old images of the firmware into distance information, identifying as a node a location that was not predicted. Nonetheless, Hayes et al. teaches the limitation (col. 10 lines: 35-40, Hayes et al. teaches the ability to update sub-blocks of data, hence the ability to determine distance information); determining a list of nodes in the old and new images of the firmware, Hayes et al. teaches limitation (wireless manager, abstract, col. 15 lines: 4-9,

has list of blocks needed to be updated) and Peleg teaches identifying as a node a location that was not predicted (abstract, column 2 line 31- column 3 line 20, column 14 line 33- column 15 line 17 where Peleg teaches identifying data records and link to data records (nodes) which were not known (had not been predicted) before the updating process and noting the difference between an old version of a data structure and a new version of a data structure). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Criss et al. and Angelo et al. to specifically include updating information with predetermined requirements as taught by Hayes et al. for the purpose of securely transferring information and updating operating software in mobile terminal and minimize the size of the difference between the old and new versions thus minimizing the size of the update package (as suggested by Peleg in column 1 lines 26-50 and column 10 lines 10-15).

Regarding claim 22. the combination of Criss et al. and Angelo et al. discloses a method for generating an update package using an old image and a new image of a firmware in a mobile services network, the method comprising the steps of: however, Criss et al. do not disclose converting symbols in the new and old images of the firmware into distance information, identifying as a node a location that was not predicted. However, Hayes et al. teaches the limitation (col. 10 lines: 35-40, Hayes et al. teaches the ability to update sub-blocks of data, hence the ability to determine distance information); determining a list of nodes in the old and new images of the firmware, Hayes et al. teaches the limitation (wireless manager, abstract, col. 15 lines: 4-9, has list of blocks needed to be updated) and Peleg teaches identifying as a node a

location that was not predicted (abstract, column 2 line 31- column 3 line 20, column 14 line 33- column 15 line 17 where Peleg teaches identifying data records and link to data records (nodes) which were not known (had not been predicted) before the updating process and noting the difference between an old version of a data structure and a new version of a data structure). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Criss et al. and Angelo et al. to specifically include updating information with predetermined requirements as taught by Hayes et al. for the purposes of securely transferring information and updating operating software in mobile terminal and minimize the size of the difference between the old and new versions thus minimizing the size of the update package (as suggested by Peleg in column 1 lines 26-50 and column 10 lines 10-15).

Consider claim 13. The network according to claim 10, the combination of Criss et al. and Angelo et al. does not specifically disclose wherein the mobile electronic device executes an update process according to the following:

downloading an update package from the update package repository; rebooting; executing the boot initialization; determining whether an update process is needed; and invoking the update agent; however, Hayes, jr. et al. teaches the mobile electronic device being able to update packages from a source, determining whether an update process is needed, and invoking the update (col. 2 lines: 28-35, Hayes teaches unit checking for updates by searching to establish communication with predetermined channels with carrier. Col. 2 lines: 36-40, second device wireless programmer has received permission to update said electronic device).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the inventions of Criss et al. and Angelo et al. to specifically include the mobile electronic device being able to update packages from a source, determining whether an update process is needed, and invoking the update, as taught by Hayes, jr. et al. for the purposes of reducing labor intensive updates (col. 1 lines: 50-55).

Consider claims 14 & 15. The network according to claim 13, the combination of Criss et al. and Angelo et al. does not disclose wherein the mobile electronic device determines the need for an update process based on status information, however, Hayes, jr. et al. teaches the electronic device determines the need for an update process based on status information (col. 2 lines: 27-35, Hayes teaches the ability to have mobile device wake up and receive updates and download them from wireless programmer; col. 16, lines: 48-51, Hayes teaches the ability of comparing and authenticate information with wireless programmer). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Criss et al. and Angelo et al. to specifically include the electronic device determines the need for an update process based on status information, as taught by Hayes, jr. et al. for the purposes of updating mobile device and reducing labor intensive updates.

Consider claim 17 and 18. The method according to claim 16 the combination of Criss et al. and Angelo et al. does not disclose wherein the determining comprises: determining addresses of symbols in the old image, however, Hayes et al. teaches the limitation (col. 2 lines: 27-35, Hayes teaches the ability to have mobile device wake up and receive updates and download them from wireless programmer); determining

addresses of symbols in the new image, however, Hayes et al. teaches the limitation (col. 6 lines: 14-16, byte by byte or in block of bytes); comparing the differences in the addresses of the symbols in the old image and the new image, however, Hayes et al. teaches the limitation (col. 16, lines: 48-51, Hayes teaches the ability of comparing and authenticate information with wireless programmer); predicting the differences in addresses of subsequent symbols, however, Hayes et al. teaches the limitation (table 2 BSS block start sequence); determining the symbols for which offsets cannot be predicted (table 2 BSS block start sequence). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Criss et al. and Angelo et al. to specifically include the updating protocol determining which codes address need to be updated as taught by Hayes, jr. et al. for the purposes of updating operating system and updating the mobile terminal.

Consider claim 19. The method according to claim 16, the combination of Criss et al. and Angelo et al. does not disclose wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase comprises: identifying instructions using instruction prediction; fixing address locations and producing filter information; and fixing data and producing filter information using block hunting.

Consider claim 20. The method according to claim 16, the combination of Criss et al. and Angelo et al. does disclose wherein the filter information comprises node location and address range information, however they do not specifically disclose where

prediction was successful, however, Hayes, jr. et al. discloses the ability to report success in updates (col. 2 lines: 49-50, Hayes teaches successfully device re-programmed). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Criss et al. and Angelo et al. to specifically include the filter information comprises node location and address range information, as taught by Hayes, jr. et al. for purposes reducing labor intensive updates (col. 1 lines: 50-55).

Consider claim 21. The method according to claim 16, the combination of Criss et al. and Angelo et al. does not disclose specifically wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase is followed by a predict phase, wherein the predict phase comprises:

However, Hayes, jr. et al. teaches performing instruction prediction utilizing the generated filter information (this is understood by examiner to be updating determination which Hayes et al. teach in col. 2 lines: 27-35, Hayes teaches the ability to have mobile device wake up and receive updates and download them from wireless programmer; col. 16, lines: 48-51, Hayes teaches the ability of comparing and authenticate information with wireless programmer); and executing block hunting utilizing the generated filter information (col. 6 lines: 8-14, Hayes teaches looking at byte by byte or in blocks of bytes to execute instructions). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Criss et al. and Angelo et al. to specifically include performing instruction prediction utilizing the generated filter information; and executing block

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hunting utilizing the generated filter information as taught by Hayes, jr. et al. for purposes of cost effective updates (col. 1 lines: 50-55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diego Herrera whose telephone number is (571) 272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617